

In re: Hayes  
Serial No. 10/632,320  
Filed: August 1, 2003  
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### **REMARKS**

Applicant appreciates the thorough examination of the present application as reflected by the Office Action. Claims 7, 9-12, 15, 20, 23-26 and 29-30 are indicated as containing allowable subject matter. Applicant submits that the present application is in form for allowance for the reasons discussed below.

Applicant submits that, in light of the indication of allowable subject matter in Claim 30, that Claim 16 also contains allowable subject matter. Applicant further notes that the rejections in paragraph 2 of the Office Action do not recite any basis for the rejection of Claim 16. Accordingly, Applicant requests confirmation that the Office Action should have included Claim 16 in the objected to claims grouping rather than the rejected claims grouping.

### **The November 20, 2003 Information Disclosure Statement:**

Applicant appreciates the Examiner's consideration of the Information Disclosure Statement (IDS) filed on October 22, 2004 as reflected by the returned initialed form PTO-1449. However, Applicant notes that a first IDS was filed on November 20, 2003, and an initialed PTO-1449 was not provided with the Office Action. A copy of the November 20, 2003 and a stamped postcard showing receipt thereof by the Patent Office on November 24, 2003 is enclosed herewith for the Examiner's convenience. Applicant respectfully requests an initialed copy of the PTO-1449 showing consideration of the cited references by the Examiner with the next communication from the Patent Office in this matter.

### **The Prior Art Rejections:**

Claims 1-6, 8, 13-14, 16-19, 21-22, 27-28 and 31-33 stand rejected under 35 U.S.C. § 102(b) as anticipated by United States Patent No. 6,201,501 to Arkko *et al.* ("Arkko"). Claims 9, 15, 23 and 29 have been placed in independent form above. Applicant submits that the claims are patentable at least for the reasons discussed below.

### **Claims 9-12, 15, 23-26 and 29 are in a Form Indicated as Allowable:**

Claims 9, 15, 23 and 29 have been amended to independent form to place them in a

form indicated as allowable. Applicant notes that, for the amended claims, the recitation that the speaker is a "flat-panel" speaker has been removed as the Examiner has indicated these claims contain allowable subject matter while providing an interpretation of the claims that appears to ignore the "flat-panel" speaker recitation as discussed below. Accordingly, Claims 9-12, 15, 23-26 and 29 are in form for allowance.

**Independent Claims 1 and 21 are Patentable Over Arkko:**

The rejection of independent Claim 1 cites to the speaker 205 of Arkko as disclosing a "flat-panel speaker." Office Action, p. 2. The rejection of independent Claim 21 cites to the speaker 105 of Arkko as disclosing a "flat-panel speaker." Office Action, p. 4. However, speaker 105 is merely illustrated as a rectangle. Speaker 205 is similarly shown as simply a rectangle. There is no indication the speaker 105 or 205 is anything other than a conventional micro-speaker commonly found in cellular telephones. Furthermore, Applicant was unable to find any discussion of a flat-panel speaker anywhere in Arkko. In contrast, various embodiments of the present invention are particularly directed to advantageous utilization of a flat-panel speaker in devices, such as cellular telephones. In particular, Claims 1 and 21 are directed to a wireless terminal and an antenna subassembly, respectively, where a flat-panel speaker is combined with an internal antenna. It is well known to those of skill in the art that a flat-panel speaker is a particular type of speaker and that not all speakers are flat-panel speakers. Accordingly, the anticipation rejections of independent Claims 1 and 21 and the claims that depend therefrom should be withdrawn for at least these reasons.

Claim 21 further recites that the "flat-panel speaker is integrated with the planar antenna." The Office Action asserts that Arkko discloses "a flat-panel speaker (105), wherein the flat-panel speaker is integrated with the planar antenna (103)." Office Action, p. 4. Figure 1 of Arkko appears to disclose nothing more than coupling of both the sound transducer 105 and the antenna 103 to the same circuit board 101. Applicant respectfully submits that this simply does not disclose a speaker "integrated with" an antenna. For example, the present application describes embodiments with an integrated speaker/antenna component 800 as contrasted with a separate speaker 130 and antenna 140. *See, e.g.,*

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specification, p. 10, lines 1-7. The specification particularly defines "integrated" as:

The terms "integrated" or "integral" mean that the flat-panel speaker **130** and the planar antenna **140** are combined so that at least a portion of the planar antenna **140** is etched, printed or otherwise formed on, attached to, and/or supported by the substrate forming the flat-panel speaker **130**.

Specification, p. 10, lines 3-6.

In light of this definition and the ordinary meaning of integrated Applicant submits that Arkko clearly does not disclose a speaker integrated with an antenna as recited in Claim 21. Accordingly, the anticipation rejections of independent Claim 21 and the claims that depend therefrom should also be withdrawn for at least these additional reasons.

**Various of the Dependent Claims are Separately Patentable:**

The dependent claims are patentable at least based on the patentability of the claims from which they depend as discussed above. In addition, various of the dependent claims are also separately patentable. For example, Claim 2 recites that the "flat-panel speaker is integrated with the internal antenna." Accordingly, Claim 2 is separately patentable for at least the reasons discussed above with respect to Claim 21. Claim 3 recites that the speaker and antenna each comprise "conductive portions that reside on a first primary surface of a common substrate." The Office Action asserts that such is disclosed by the speaker 205 and antenna 203 of Arkko. Office Action, p. 2. However, while speaker 205 and antenna 203 may be on the same side of circuit board 201, they do not "reside on" a "surface" of the circuit board 201. Accordingly, Claim 3 is separately patentable for at least these reasons.

Claim 13 recites that the speaker acts as a "parasitic element" to the antenna and Claim 14 recites that it provides a lower frequency range frequency response for the antenna. The Office Action asserts that the speaker 205 of Arkko is "configured to act as a parasitic element that provides a lower frequency range frequency response for the internal antenna Arkko, Col. 3, Line 1." Office Action, p. 3. Col. 4, line 4 is also relied on is teaching the parasitic element recitations of Claim 13. The cited portions of Arkko, in there entirety, state: "which appears electrically as a half wavelength (about 9.5" (Arkko, Col. 3, line 1); and "201 has a PCB hole 202 with a speaker 205 mounted facing" (Arkko, Col. 4, line 4).

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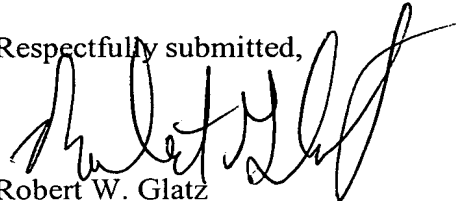
Applicant submits that neither these portions or any other portion of Arkko discloses or suggests the recitations of Claims 13 or 14 and, accordingly, these claims are separately patentable for at least these reasons.

Claims 22 and 27-28 are separately patentable for reasons corresponding to the reasons discussed above with reference to dependent claims containing similar recitations. Claim 7 is separately patentable at least for the reasons that this claim is indicated as containing allowable subject matter in the Office Action. Office Action, p. 4.

### CONCLUSION

Applicant respectfully submits that, for the reasons discussed above, the references cited in the present rejections do not disclose or suggest the present invention as claimed. Accordingly, Applicant respectfully requests allowance of all the pending claims and passing this application to issue.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on January 27, 2005.

  
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Carey Gregory



Attorney Docket No. 9314-

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Gerard Hayes

Application Serial No.: 10/632,320

Group Art Unit: 2821

Filed: August 1, 2003

Confirmation No.: 5223

For: INTERNAL ANTENNA AND FLAT PANEL SPEAKER ASSEMBLIES AND MOBILE  
TERMINALS INCLUDING THE SAME

Date: November 20, 2003

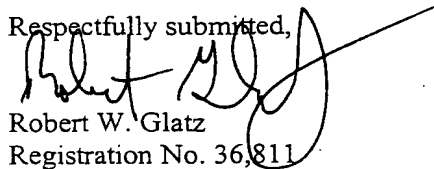
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT  
PURSUANT TO 37 C.F.R. § 1.97(b)

Sir:

Attached is a list of documents on Form PTO-1449, together with a copy of any listed foreign patent document and/or non-patent literature. A copy of any listed U.S. patent and/or U.S. patent application publication is not provided herewith in accordance with the waiver by the U.S. Patent and Trademark Office of requirements under 37 C.F.R. § 1.98(a)(2)(i) for all U.S. national patent applications filed after June 30, 2003 and for all international applications that have entered the national stage under 35 USC § 371 after June 30, 2003. It is requested that these documents be considered by the Examiner and officially made of record in accordance with the provisions of 37 C.F.R. § 1.56 and Section 609 of the MPEP. No fee is believed due. However, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-0220.

Respectfully submitted,



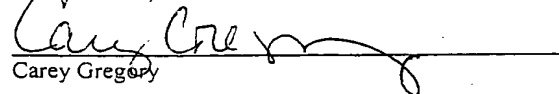
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Carey Gregory

JAN 31 2005

FORM PTO-1449 U.S. Department of Commerce  
Patent and Trademark Office

Attorney Docket Number  
9314-43

Serial No.

## LIST OF DOCUMENTS CITED BY APPLICANT

(Use several sheets if necessary)

Applicants:

Gerard Hayes

Filing Date:

August 1, 2003

Group

2821

## U. S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1.	6,353,443	3/5/02	Ying	343	850	
	2.	6,166,694	12/26/00	Ying	343	702	
	3.	5,926,139	7/20/99	Korish	343	700	

## FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes   No

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	4.	"Card Type Speakers: WM-R30B, WM-R57A," Panasonic (published prior to 8/1/03)
	5.	Kin-Lu Wong, "Planar Antennas for Wireless Communications," Chapter 1, John Wiley & Sons, Ltd. copyright 2000-2003 <a href="http://www.wileyurope.com">http://www.wileyurope.com</a> (date of access April 15, 2003).

EXAMINER

\*EXAMINER

DATE CONSIDERED

Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

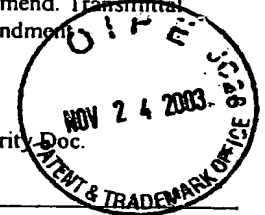


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*RWG/ly* Date: 11-20-03  
12-01-03 AUG: Doc. No. 934-43  
Serial No. 101632320  
Inventor: Hayes

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Respectfully submitted,  
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